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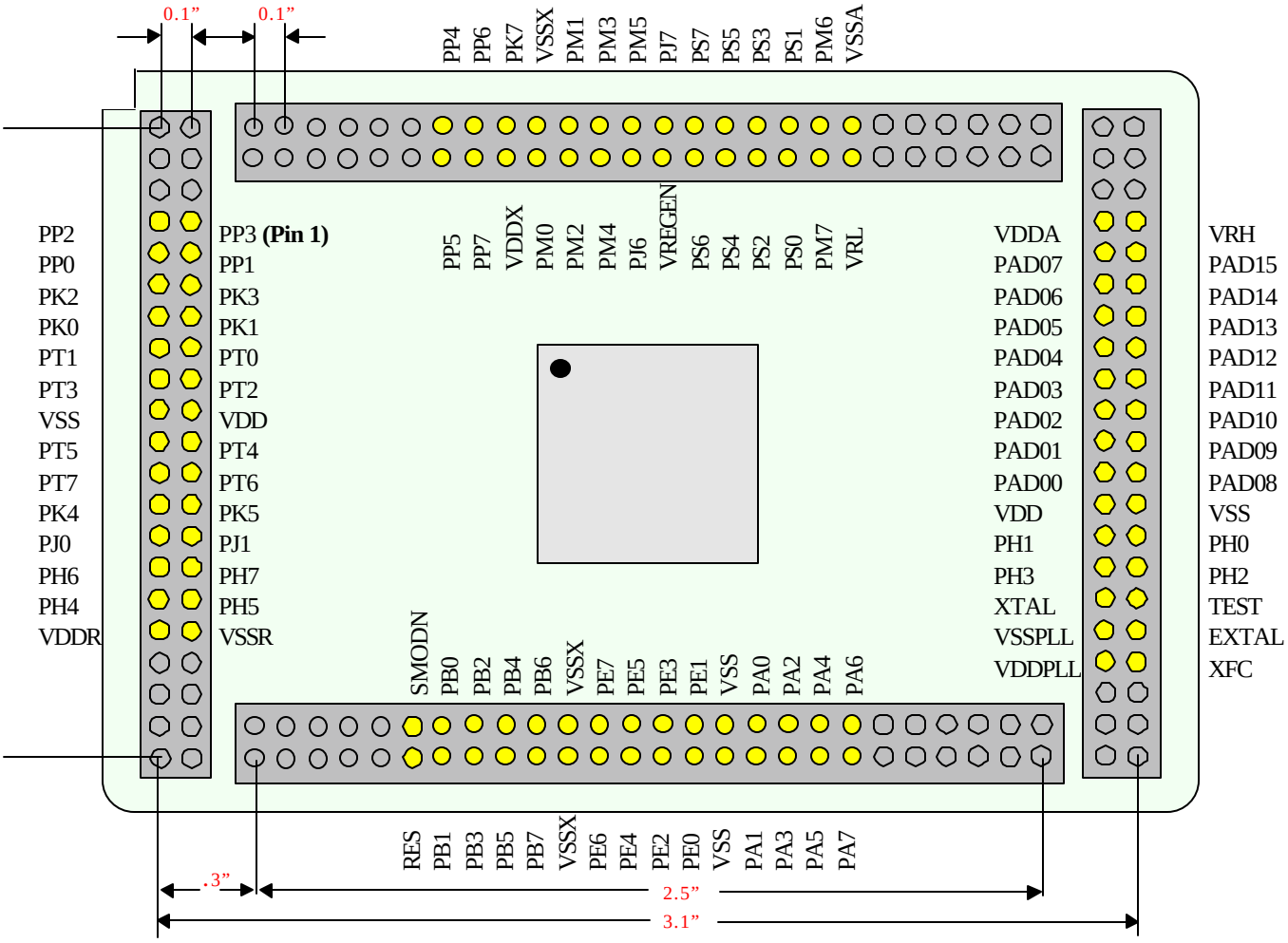
EMUL-MC9S12DP256, MC9S12Dxxx family and MC9S12Bxxx family Layout

This is the top view looking down onto the target board or on top of the MC9S12Dxxx personality card.

Top View - MC9S12Dxxx

Version 2.5
December 17, 2001



1) The grayed out pins are not connected. They are physically located on the bottom of the emulator board but are not used on the personality card. They are for future expansion.

2) The target microcontroller needs to be removed from the target since the HC12 family cannot tri-state.

3) The target adapters do not plug into the top of the emulator, they plug in on the bottom side.

Helpful measurements when laying out the board:

On the top side, the emulator expands 0.2".
O n the bottom side, the emulator expands 4.3".
On the left side the emulator expands 0.3".
On the right side the emulator expands 0.6".

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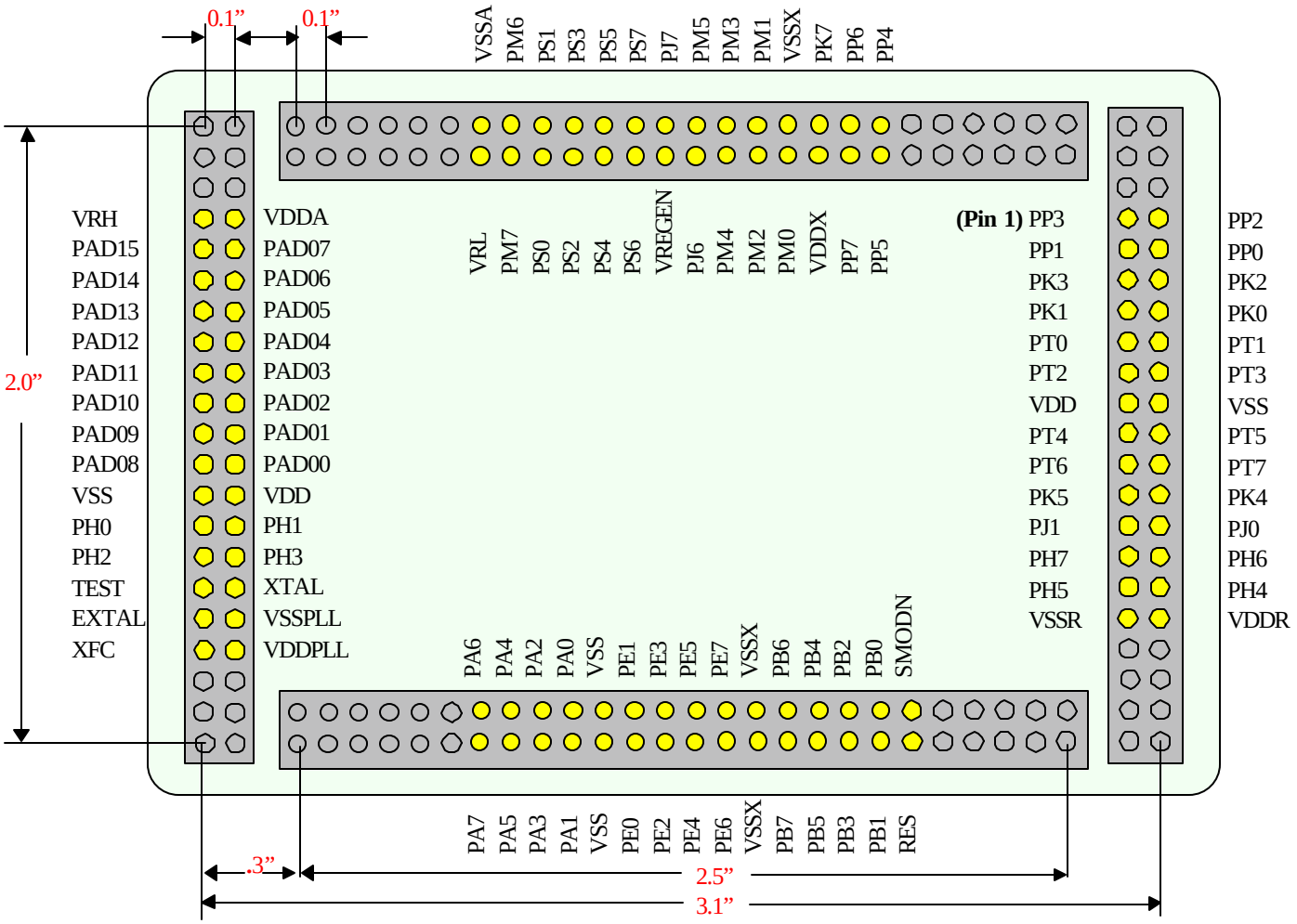
EMUL-MC9S12DP256, MC9S12Dxxx family and MC9S12Bxxx family Layout

This is the view looking at the bottom of the DP256 emulator.

Version 2.5
December 17, 2001

Bottom View - MC9S12Dxxx



1) The grayed out pins are not connected. They are physically located on the bottom of the emulator board but are not used on the personality card. They are for future expansion.

2) The target microcontroller needs to be removed from the target since the HC12 family cannot be tri-stated.

3) The target adapters do not plug into the top of the emulator, they plug in on the bottom side.

EMUL-MC9S12DP256, MC9S12Dxxx family and MC9S12Bxxx family Pinouts

These are all the pin assignments for the MC9S12DP256, MC9S12Dxxx family and MC9S12Bxxx family with the alternate names, if applicable.

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Version 2.1

December 17, 2001

Pin 1	$\overline{SS1}$ / PWM3 / KWP3/PP3
Pin 2	SCK1 / PWM2 / KWP2 / PP2
Pin 3	MOSI1 / PWM1 / KWP1 / PP1
Pin 4	MISO1 / PWM0 / KWP0 / PP0
Pin 5	**XADDR17 / PK3**
Pin 6	**XADDR16 / PK2**
Pin 7	**XADDR15 / PK1**
Pin 8	**XADDR14 / PK0**
Pin 9	IOC0 / PT0
Pin 10	IOC1 / PT1
Pin 11	IOC2 /PT2
Pin 12	IOC3 / PT3
Pin 13	V DD1
Pin 14	V SS1
Pin 15	IOC4 / PT4
Pin 16	IOC5 / PT5
Pin 17	IOC6 / PT6
Pin 18	IOC7 / PT7
Pin 19	**XADDR19 / PK5**
Pin 20	**XADDR18 / PK4**
Pin 21	**KWJ1 / PJ1**
Pin 22	**KWJ0 / PJ0**
Pin 23	MODC / $\overline{TAGHI}$ / BKGD
Pin 24	ADDR0 / DATA0 / PB0
Pin 25	ADDR1 / DATA1 / PB1
Pin 26	ADDR2 / DATA2 / PB2
Pin 27	ADDR3 / DATA3 / PB3
Pin 28	ADDR4 / DATA4 / PB4
Pin 29	ADDR5 / DATA5 / PB5
Pin 30	ADDR6 / DATA6 / PB6
Pin 31	ADDR7 / DATA7 / PB7
Pin 32	**KWH7 / PH7**
Pin 33	**KWH6 / PH6**
Pin 34	**KWH5 / PH5**
Pin 35	**KWH4 / PH4**
Pin 36	$\overline{XCLKS}$ / NOACC / PE7
Pin 37	MODB / IPIPE1 / PE6
Pin 38	MODA / IPIPE0 / PE5
Pin 39	ECLK / PE4
Pin 40	V SSR
Pin 41	$\overline{V DDR}$
Pin 42	$\overline{RESET}$
Pin 43	V DDPLL
Pin 44	XFC
Pin 45	V SSPLL
Pin 46	EXTAL
Pin 47	XTAL
Pin 48	TEST
Pin 49	**KWH3 / PH3**
Pin 50	**KWH2 / PH2**
Pin 51	**KWH1 / PH1**
Pin 52	**KWH0 / PH0**
Pin 53	$\overline{LSTRB}$ / TAGLO / PE3
Pin 54	R /$\overline{W}$ / PE2
Pin 55	$\overline{IRQ}$ / PE1
Pin 56	$\overline{XIRQ}$ / PE0
Pin 57	PA0 / ADDR8 / DATA8
Pin 58	PA1 / ADDR9 / DATA9
Pin 59	PA2 / ADDR10 / DATA10
Pin 60	PA3 / ADDR11 / DATA11
Pin 61	PA4 / ADDR12 / DATA12
Pin 62	PA5 / ADDR13 / DATA13
Pin 63	PA6 / ADDR14 / DATA14
Pin 64	PA7 / ADDR15 / DATA15
Pin 65	VDD2
Pin 66	VSS2
Pin 67	PAD00 / AN00
Pin 68	PAD08 / AN08
Pin 69	PAD01 / AN01
Pin 70	PAD09 / AN09
Pin 71	PAD02 / AN02
Pin 72	PAD10 / AN10
Pin 73	PAD03 / AN03
Pin 74	PAD11 / AN11
Pin 75	PAD04 / AN04
Pin 76	PAD12 / AN12
Pin 77	PAD05 / AN05
Pin 78	PAD13 / AN13
Pin 79	PAD06 / AN06
Pin 80	PAD14 / AN14
Pin 81	PAD07 / AN07
Pin 82	PAD15 / AN15
Pin 83	VDDA
Pin 84	VRH
Pin 85	VRL
Pin 86	Vssa
Pin 87	**PM7 / TxCAN3**
Pin 88	**PM6 / RxCAN3**
Pin 89	PS0 /RxD0
Pin 90	PS1 / TxD0
Pin 91	PS2 / RxD1
Pin 92	PS3 / TxD1
Pin 93	**PS4 / MISO0**
Pin 94	**PS5 / MOSI0**
Pin 95	**PS6 / SCK0**
Pin 96	**PS7 / SS0**
Pin 97	VREGEN
Pin 98	PJ7 / KWJ7 / TxCAN4 / SCL
Pin 99	PJ6 / KWJ6 / RxCAN4 / SDA
Pin 100	PM5 / TxCAN2
Pin 101	PM4 / RxCAN2
Pin 102	PM3 / TxCAN1
Pin 103	PM2 / RxCAN1
Pin 104	PM1 / TxCAN0 / TxB
Pin 105	PM0 / RxCAN0 / RxB
Pin 106	VSSX
Pin 107	$\overline{VDDX}$
Pin 108	**PK7 / ECS / ROMONE**
Pin 109	PP7 / KWP7 / PWM7 / SCK2
Pin 110	**PP6 / KWP6 / PWM6 / SS2**
Pin 111	PP5 / KWP5 / PWM5 / MOS12
Pin 112	PP4 / KWP4 / PWM4 / MIS02

Note: These pinouts are for the 112-pin version of the device. The pins shown in bold are not available on the 80-pin version.